

## Scientists say early risers have Neanderthal genes

21st December 2023



Early risers are people who naturally wake up early in the morning. Their body clock causes them to get up while most of us are still in deep sleep. Researchers at the University of California said early risers could have some shared DNA

from Neanderthals – our ancestors who lived over 40,000 years ago. Neanderthals lived in northern parts of Europe and Asia. They woke up earlier to hunt for or gather food as the sun rose. Researcher Dr Tony Capra said: "At higher latitudes, it is beneficial to have a body clock that is better able to anticipate and change to match the changing seasonal light levels." He added: "Having a 'faster' body clock...makes individuals more likely to rise early."

Scientists have spent a long time looking at why some people are early birds, while others are night owls. They looked at a medical database with genetic information for hundreds of thousands of people. They compared the DNA of people who said they were early risers with the Neanderthal DNA. Their research found more examples of Neanderthal DNA existed in the early risers. However, it is likely that the Neanderthal gene is not so strong in many people. The effect of the Neanderthal DNA may be weakening as the centuries pass. Our modern lifestyles mean many of us prefer sleeping in to leaving the comfort of our bed. Nevertheless, it may still be true that the early bird catches the worm.

Sources: [cnn.com](http://cnn.com) / [gizmodo.com](http://gizmodo.com) / [boredpanda.com](http://boredpanda.com)

### Writing

Everyone should get up early in the morning. Discuss.

### Chat

Talk about these words from the article.

early risers / wake up / morning / deep sleep / ancestors / hunt / body clock / light / birds / database / genes / DNA / Neanderthals / centuries / modern lifestyles / worms

### True / False

- 1) The article says early risers set an alarm clock to wake up. T / F
- 2) The researchers found DNA at the University of California. T / F
- 3) Neanderthals were on Earth 40,000 years ago. T / F
- 4) Researchers said a slower body clock means we wake up earlier. T / F
- 5) Owls share a similar kind of DNA to Neanderthals. T / F
- 6) Scientists compared Neanderthal DNA with DNA in a medical database. T / F
- 7) The Neanderthal DNA could be becoming weaker. T / F
- 8) The article says the early worm catches the bird. T / F

### Synonym Match

(The words in **bold** are from the news article.)

- |                       |                 |
|-----------------------|-----------------|
| 1. <b>ancestors</b>   | a. probable     |
| 2. <b>gather</b>      | b. details      |
| 3. <b>beneficial</b>  | c. get up       |
| 4. <b>anticipate</b>  | d. luxury       |
| 5. <b>rise</b>        | e. predict      |
| 6. <b>information</b> | f. collect      |
| 7. <b>existed</b>     | g. go by        |
| 8. <b>likely</b>      | h. forebears    |
| 9. <b>pass</b>        | i. was found    |
| 10. <b>comfort</b>    | j. advantageous |

### Discussion – Student A

- a) What do you think about what you read?
- b) Are you a night owl or an early bird?
- c) Why do some people prefer mornings?
- d) Is it healthier to wake up when the sun rises?
- e) How has technology changed our sleeping patterns?
- f) How comfortable is your bed?
- g) Does the early bird catch the worm?
- h) What questions would you like to ask the scientists?

## Phrase Match

- |                                    |                                |
|------------------------------------|--------------------------------|
| 1. people who naturally wake       | a. information                 |
| 2. most of us are still in         | b. lived over 40,000 years ago |
| 3. our ancestors who               | c. of our bed                  |
| 4. hunt for or gather              | d. birds                       |
| 5. body                            | e. catches the worm            |
| 6. some people are early           | f. up early in the morning     |
| 7. a medical database with genetic | g. as the centuries pass       |
| 8. DNA may be weakening            | h. food                        |
| 9. leaving the comfort             | i. deep sleep                  |
| 10. the early bird                 | j. clock                       |

## Discussion – Student B

- What are the good things about being an early riser?
- What do you know about Neanderthals?
- What do you know about your body clock?
- What do you know about DNA?
- What do you do when you wake up early?
- How do you feel when you wake up late?
- What's the best time to wake up?
- Would you prefer to live in higher or lower latitudes?

## Spelling

- people who uranltlya wake up early
- our tcaesnors who lived over 40,000 years ago
- it is licniaeebf to have a body clock
- at higher tatileuds
- match the changing anslaso light levels
- ivdniaulds more likely to rise early
- a medical ebaastda
- inegtce information
- They aredmcpo the DNA of people
- DNA xtisdee in the early risers
- Neanderthal DNA may be nwkgniaee
- as the seecnrtui pass

### Answers – Synonym Match

1. h	2. f	3. j	4. e	5. c
6. b	7. i	8. a	9. g	10. d

## Role Play

### Role A – Work

You think work is the thing that affects our sleep most. Tell the others three reasons why. Tell them why their things aren't as bad. Also, tell the others which is the thing that least affects sleep of these (and why): studying, stress or gaming.

### Role B – Studying

You think studying is the thing that affects our sleep most. Tell the others three reasons why. Tell them why their things aren't as bad. Also, tell the others which is the thing that least affects sleep of these (and why): work, stress or gaming.

### Role C – Stress

You think a stress is the thing that affects our sleep most. Tell the others three reasons why. Tell them why their things aren't as bad. Also, tell the others which is the thing that least affects sleep of these (and why): studying, work or gaming.

### Role D – Gaming

You think gaming is the thing that affects our sleep most. Tell the others three reasons why. Tell them why their things aren't as bad. Also, tell the others which is the thing that least affects sleep of these (and why): studying, stress or work.

## Speaking – Sleeping

Rank these with your partner. Put the things most likely to stop you sleeping at the top. Change partners often and share your rankings.

- |               |               |
|---------------|---------------|
| • Work        | • Social life |
| • Studying    | • Housework   |
| • Movies      | • Gaming      |
| • Smartphones | • Stress      |

### Answers – True False

1	F	2	F	3	T	4	F	5	F	6	T	7	T	8	F
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Answers to Phrase Match and Spelling are in the text.